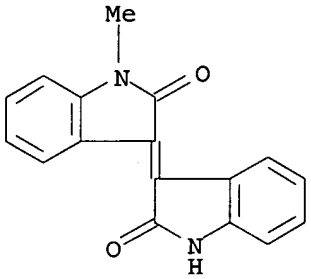
L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN
RN 97207-47-1 REGISTRY
ED Entered STN: 13 Jul 1985
CN 2H-Indol-2-one, 3-(1,2-dihydro-2-oxo-3H-indol-3-ylidene)-1,3-dihydro-1-methyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Dian III
CN Meisoindigo
CN N-Methylisoindigotin
MF C17 H12 N2 O2
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, CHEMCATS, MEDLINE, NAPRALERT, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

26 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
26 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file medicine
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	7.10	7.31

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10/754547

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FILE 'DRUGU' ENTERED AT 14:50:21 ON 21 DEC 2006

FILE 'EMBAL' ENTERED AT 14:50:21 ON 21 DEC 2006

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FILE 'IFIPAT' ENTERED AT 14:50:21 ON 21 DEC 2006

FILE 'IMSDRUGNEWS' ENTERED AT 14:50:21 ON 21 DEC 2006

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FILE 'KOSMET' ENTERED AT 14:50:21 ON 21 DEC 2006

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FILE 'USPATFULL' ENTERED AT 14:50:21 ON 21 DEC 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 14:50:21 ON 21 DEC 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

=> s l1 or meisoindigo
'CN' IS NOT A VALID FIELD CODE
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'CN' IS NOT A VALID FIELD CODE
L2          117 L1 OR MEISOINDIGO

=> s inflammation or anti inflammat?
  14 FILES SEARCHED...
L3      2389166 INFLAMMATION OR ANTI INFLAMMAT?

=> s l3 and l4
L4 NOT FOUND
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Jagoe

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The L-number entered could not be found. To see the definition
of L-numbers, enter DISPLAY HISTORY at an arrow prompt (=>).

=> s l2 and l3
  29 FILES SEARCHED...
L4          15 L2 AND L3

=> dup rem
ENTER L# LIST OR (END):l4
DUPLICATE IS NOT AVAILABLE IN 'ADISINSIGHT, ADISNEWS, DGENE, DRUGMONOG2,
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ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L4
L5            8 DUP REM L4 (7 DUPLICATES REMOVED)

=> d l5 1-8 ibib, kwic

L5   ANSWER 1 OF 8  CAPLUS  COPYRIGHT 2006 ACS on STN  DUPLICATE 1
ACCESSION NUMBER:         2005:983776 CAPLUS
DOCUMENT NUMBER:          143:279380
TITLE:                    Methods using isoindigo, indigo, indirubin, and
                          related compounds for treating an inflammatory-related
                          disease
INVENTOR(S):              Wang, Longgui; Liu, Xiao Mei; Mo, Lian; Mencher, Simon
                          K.; McCarron, James P., Jr.
PATENT ASSIGNEE(S):       USA
SOURCE:                   U.S. Pat. Appl. Publ., 40 pp., Cont.-in-part of U.S.
                          Ser. No. 864,458.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   4
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    --------------------     --------
     US 2005197381         A1    20050908    US 2005-104422           20050413
     US 6566341            B1    20030520    US 2001-21589            20011213
     WO 2003051900         A1    20030626    WO 2002-US39866          20021213
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,
             UG, US, UZ, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     US 2005154046         A1    20050714    US 2004-754547           20040112
     US 2004225002         A1    20041111    US 2004-864458           20040610
     US 6933315            B2    20050823

PRIORITY APPLN. INFO.:                      US 2001-21589        A2 20011213
                                            US 2002-407267P      P  20020903
                                            WO 2002-US39866      A1 20021213
                                            US 2004-754547       A2 20040112
                                            US 2004-864458       A2 20040610

OTHER SOURCE(S):          MARPAT 143:279380
AB   The invention discloses pharmaceutical compns. and methods of treating
```

inflammatory-related diseases associated with proinflammatory cytokine expression and/or reduced expression of antiinflammatory cytokines. The method typically comprises administration of one or more compds. selected from isoindigo, indigo, indirubin, or derivs. thereof, e.g. Meisoindigo and NATURA. Preferably the pharmaceutical composition comprises one or more compds. selected from isoindigo, indigo, indirubin, or derivs. thereof, an antiinflammatory agent, and a pharmaceutically acceptable carrier.

ST inflammation disease antiinflammatory isoindigo indigo indirubin; Meisoindigo Natura inflammation disease antiinflammatory

IT Inflammation
(Crohn's disease; isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

IT Allergy
Eye, disease
Inflammation
(allergic conjunctivitis; isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

IT Allergy
Inflammation
Nose, disease
(allergic rhinitis; isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

IT Inflammation
Spinal column, disease
(ankylosing spondylitis; isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

IT Inflammation
Intestine, disease
(colitis; isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

IT Inflammation
Kidney, disease
(glomerulonephritis; isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

IT Inflammation
(granulomatous; isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

IT Allergy
Allergy inhibitors
Alzheimer's disease
Analgesics
Anemia (disease)
Anti-Alzheimer's agents
Anti-inflammatory agents
Antiarthritics
Antiasthmatics
Antidiabetic agents
Antidiarrheals
Antimalarials
Antiparkinsonian agents
Antirheumatic agents
Arthritis
Asthma
Atherosclerosis
Bone, disease
Cardiovascular agents
Cardiovascular system, disease

Celiac disease
Combination chemotherapy
Cystic fibrosis
Dermatitis
Diarrhea
Digestive tract, disease
Drug delivery systems
Eye, disease
Fibrosis
Gastrointestinal agents
Heart, disease
Human
Immunostimulants
Immunosuppressants
Inflammation
Kidney, disease
Leprosy
Liver, disease
Lung, disease
Lupus erythematosus
Metabolic disorders
Multiple sclerosis
Nervous system agents
Parkinson's disease
Psoriasis
Rheumatoid arthritis
Sarcoidosis
Sjogren syndrome
(isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

IT Inflammation
Pancreas, disease
(pancreatitis; isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

IT Biliary tract, disease
Inflammation
(sclerosing cholangitis; isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

IT Inflammation
Intestine, disease
(ulcerative colitis; isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

IT Eye, disease
Inflammation
(uveitis; isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

IT Blood vessel, disease
Inflammation
(vasculitis; isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

IT 50-02-2, Dexamethasone 50-23-7, Hydrocortisone 52-67-5, Penicillamine 53-36-1, Methylprednisolone acetate 53-86-1, Indomethacin 76-25-5, Triamcinolone acetonide 89-57-6, Mesalamine 312-93-6, Dexamethasone phosphate 599-79-1, Sulfasalazine 1524-88-5, Flurandrenolide 2152-44-5, Betamethasone valerate 3385-03-3, Flunisolide 6000-74-4, Hydrocortisone sodium phosphate 6054-98-4, Olsalazine sodium 13609-67-1, Hydrocortisone butyrate 15687-27-1, Ibuprofen 22204-53-1, Naproxen 25122-46-7, Clobetasol propionate 38194-50-2, Sulindac 51333-22-3, Budesonide 59865-13-3, Cyclosporine 64425-90-7, Choline

magnesium trisalicylate 66734-13-2, Alclometasone dipropionate 69049-74-7, Nedocromil sodium 74103-07-4, Ketorolac tromethamine 77011-63-3, Beclomethasone dipropionate monohydrate 80474-14-2, Fluticasone propionate 97207-47-1 141646-00-6, Mometasone furoate monohydrate 162011-90-7, Rofecoxib 181695-72-7, Valdecoxib 213594-60-6, Balsalazide disodium 526194-76-3 864057-69-2
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(isoindigo, indigo, indirubin, and related compds. for treatment of inflammatory-related disease)

L5 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2005:611844 CAPLUS
DOCUMENT NUMBER: 143:109788
TITLE: Methods of treating an inflammatory-related disease
INVENTOR(S): Wang, Longgui; Liu, Xiao Mei; Mo, Lian; Mencher, Simon K.; McCarron, James P.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 37 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005154046	A1	20050714	US 2004-754547	20040112
CA 2547963	A1	20050804	CA 2005-2547963	20050106
WO 2005069933	A2	20050804	WO 2005-US169	20050106
WO 2005069933	A3	20050909		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1706112	A2	20061004	EP 2005-704992	20050106
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
US 2005197381	A1	20050908	US 2005-104422	20050413

PRIORITY APPLN. INFO.:		
US 2001-21589	A2	20011213
US 2002-407267P	P	20020903
WO 2002-US39866	A1	20021213
US 2004-754547	A	20040112
US 2004-864458	A2	20040610
WO 2005-US169	W	20050106

OTHER SOURCE(S): MARPAT 143:109788
AB The invention relates to pharmaceutical compns. and methods of treating inflammatory-related diseases associated with pro-inflammatory cytokine expression and/or reduced expression of anti-inflammatory cytokines. The method typically comprises administration of one or more compds. selected from isoindigo, indigo,

indirubin, or derivs. thereof, such as, Meisoindigo and NATURA. Preferably the pharmaceutical composition comprises one or more compds. selected from isoindigo, indigo, indirubin, or derivs. thereof, an anti-inflammatory agent, and a pharmaceutically acceptable carrier.

IT Inflammation
(Crohn's disease; methods of treating inflammatory-related disease)

IT Allergy
Eye, disease
Inflammation
(allergic conjunctivitis; methods of treating inflammatory-related disease)

IT Allergy
Inflammation
Nose, disease
(allergic rhinitis; methods of treating inflammatory-related disease)

IT Inflammation
Spinal column, disease
(ankylosing spondylitis; methods of treating inflammatory-related disease)

IT Inflammation
Intestine, disease
(colitis, nonspecific; methods of treating inflammatory-related disease)

IT Inflammation
Kidney, disease
(glomerulonephritis; methods of treating inflammatory-related disease)

IT Inflammation
(granulomatous; methods of treating inflammatory-related disease)

IT Allergy
Alzheimer's disease
Analgesics
Anemia (disease)
Animals
Anti-Alzheimer's agents
Anti-inflammatory agents
Antiarthritics
Antiparkinsonian agents
Antirheumatic agents
Arthritis
Asthma
Atherosclerosis
Bone, disease
Cardiovascular system, disease
Celiac disease
Cystic fibrosis
Dermatitis
Diarrhea
Digestive tract, disease
Eye, disease
Fibrosis
Human
Inflammation
Kidney, disease
Leprosy
Liver, disease
Lung, disease
Lupus erythematosus
Metabolic disorders

Multiple sclerosis
Parkinson's disease
Psoriasis
Rheumatoid arthritis
Sarcoidosis
Sjogren syndrome
(methods of treating inflammatory-related disease)

IT Inflammation
Pancreas, disease
(pancreatitis; methods of treating inflammatory-related disease)

IT Biliary tract, disease
Inflammation
(sclerosing cholangitis; methods of treating inflammatory-related disease)

IT Inflammation
Intestine, disease
(ulcerative colitis; methods of treating inflammatory-related disease)

IT Eye, disease
Inflammation
(uveitis; methods of treating inflammatory-related disease)

IT Blood vessel, disease
Inflammation
(vasculitis; methods of treating inflammatory-related disease)

IT 50-02-2, Dexamethasone 50-23-7, Hydrocortisone 52-67-5, Penicillamine 53-36-1, Methylprednisolone acetate 53-86-1, Indomethacin 77-86-1, Tromethamine 89-57-6, Mesalamine 124-94-7, Triamcinolone 312-93-6, Dexamethasone phosphate 476-34-6, Isoindigo 476-34-6D, Isoindigo, derivs. 479-41-4, Indirubin 479-41-4D, Indirubin, derivs. 482-89-3, Indigo 482-89-3D, Indigo, derivs. 599-79-1, Sulfasalazine 1524-88-5, Flurandrenolide 2152-44-5, Betamethasone valerate 3385-03-3, Flunisolide 4419-39-0, Beclomethasone 6000-74-4, Hydrocortisone sodium phosphate 13609-67-1, Hydrocortisone butyrate 15687-27-1, Ibuprofen 15722-48-2, Olsalazine 22204-53-1, Naproxen 25122-46-7, Clobetasol propionate 38194-50-2, Sulindac 51333-22-3, Budesonide 59865-13-3, Cyclosporin A 64425-90-7, Choline magnesium trisalicylate, biological studies 66734-13-2, Alclometasone dipropionate 69049-73-6, Nedocromil 74103-07-4, Ketorolac tromethamine 90566-53-3, Fluticasone 97207-47-1, Meisoindigo 141646-00-6, Mometasone furoate monohydrate 162011-90-7, Rofecoxib 181695-72-7, Valdecoxib 213594-60-6, Balsalazide Disodium 526194-76-3, Natura
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods of treating inflammatory-related disease)

L5 ANSWER 3 OF 8 USPATFULL on STN DUPLICATE 3

ACCESSION NUMBER: 2004:286834 USPATFULL
TITLE: Derivatives of isoindigo, indigo and indirubin and methods of treating cancer
INVENTOR(S): Wang, Longgui, Flushing, NY, UNITED STATES
Liu, Xiaomei, Flushing, NY, UNITED STATES
Chen, Ruihuan, Foster City, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004225002	A1	20041111
	US 6933315	B2	20050823
APPLICATION INFO.:	US 2004-864458	A1	20040610 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 2002-US39866, filed on 13 Dec 2002, PENDING Continuation of Ser. No. US

2001-21589, filed on 13 Dec 2001, GRANTED, Pat. No. US 6566341

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-407267P	20020903 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: WINSTON & STRAWN, PATENT DEPARTMENT, 1400 L STREET, N.W., WASHINGTON, DC, 20005-3502
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Page(s)
LINE COUNT: 1522
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM [0008] Our previous studies demonstrated that meisoindigo, a second generation of indirubins, arrests leukemia cells at G1 phase, inhibits expression of oncogene c-myb, and induces cell differentiation. . .

SUMM [0018] Additionally, the present invention provides a method of synthesizing a meisoindigo compound by adding about equal molar amounts of 2-hydroxyindole and N-methyl-indolinyl-diketone to produce a reaction substance; mixing the reaction substance. . . about 70 to 80° C. for 1 to 3 hours to form a precipitate, and recovering the precipitate as the meisoindigo compound.

DRWD [0021] FIG. 1 shows the chemical structures of Indirubin, Meisoindigo, and NATURA, a new chemical entity in accordance with the invention.

DRWD . . . of DNA fragmentation in prostate cancer LNCaP cells (panel A) and neuroblastoma N2A cells (panel B) having been exposed to Meisoindigo, NATURA or Taxol.

DRWD [0032] FIG. 12. shows the effect of Meisoindigo and NATURA on the protein level of cyclin D1.

DETD [0053] Additionally, the present invention provides a method of synthesizing meisoindigo comprising: adding about equal molar amounts of 2-hydroxyindole and N-methyl-indolinyl-diketone to produce a reaction substance; mixing the reaction substance with. . .

DETD [0078] Reagents: Meisoindigo and NATURA and other sugar derivatives were synthesized by Natrogen, purified by PHLC with a purity of 98.5%, and structures. . .

DETD . . . cell basal medium) and RPMI 1640 containing 10% FBS, respectively. The cells grown exponentially were exposed to indicated concentrations of meisoindigo or NATURA for 24 hr. The cells were harvested, washed, and total proteins extracted as described previously [13]. One hundred. . . (represent cdk activity) was measured by scintillation counting or by SDS-polyacrylaimde gel electrophoresis [14, 15]. The direct inhibitory effects of Meisoindigo and NATURA were also measured by reaction of immuno-purified specific enzyme from untreated cells directly with the Meisoindigo or NATURA.

DETD . . . cancer cells including cancer cell lines of breast, prostate, colon and lung (IC.sub.50 are between 1.5 to 9.0 μM). Both Meisoindigo and NATURA also exhibit very low toxicity with LD.sub.50 in mice. The test data below is for Meisoindigo 3.9±0.8 g/kg, and for NATURA 7.33+1.15 g/kg as compared to a value for Cisplatin of 15.9±1.3 mg/kg under the same. . .

DETD . . . the targeting of those cancer cells that escape from treatments at the earlier stage of the cycle. At low concentrations, Meisoindigo inhibits cyclin-D mediated cdk activity, and at

higher concentration, it interferes with both cyclin A and/or B mediated cdk activity. . .

DETD . . . cyclin A, cyclin B and cyclin E), the cyclin-dependent kinases (CDKs, cdk4/6, cdk2, and cdc2) and their inhibitors (p15/p16/p18/19, p21/p27). Meisoindigo and NATURA specifically inhibit activities of cdk4/6, cdk2, and cdc2, thus against cell proliferation. Those compounds have also showed to. . .

DETD [0086] Anticancer activity in animal models of Meisoindigo and NATURA: Two established animal cancer models, Lewis lung carcinoma, and Walker 256 sarcoma [17-20], have been used to evaluate anti-solid tumor activities of meisoindigo and NATURA as described previously. Briefly, C57 mice, body weight between 18 to 22 grams, and rat, body weight between. . . or Walker sarcoma cells were transplanted into mice or rat. Twenty-four hrs after the transplantation, equal molar dosages of indirubin, meisoindigo, NATURA or its sugar derivatives were given orally for 10 days. The animals in the control group were given 0.1. . .

DETD . . . of NATURA on Human Cancer Cells: A good response of different types of human cancer cells to the treatment of Meisoindigo and NATURA was obtained by MTT after three day exposure, including cancer cell lines of breast (MCF-7 and SKBR-3, Table. . . dependent and independent prostate (LNCaP, PC-3 and DU145, Table 3). As shown in Table 1-3, the growth inhibitory effects of Meisoindigo (IC50 2.15 to 8.31 μM) on all of those tested human cancer cell lines are much stronger than retinoid acid. . . of NATURA (IC50 from 1.64 to 6.92 μM), the anticancer activities of NATURA is slightly stronger than its parental compound Meisoindigo (IC50 2.1 to 8.3 μM). We expect that a much stronger anticancer activity of NATURA than Meisoindigo will occur in vivo due to a significant improvement of its bioavailability by increasing its solubility. Similar results for all. . . therapeutic agents, Casodex and Proscar (Table 3). No significant differences of those cancer cells in response to the treatment of Meisoindigo and NATURA were observed whereas cancer cells of breast and colon seem more sensitive than that of prostate (Table 3) in response to the treatment of Daunomycin. These data support that Meisoindigo and NATURA are against a common target of cancer cells, i.e. cyclin dependent kinases, thus it will be proven to. . . be a useful chemotherapeutic agent for the treatment of various types of human solid tumors. Although the anticancer effect of Meisoindigo and NATURA are weaker than that of daunomycin or paclitaxel in vitro assay, it is noted that the toxicities of Meisoindigo and NATURA may much lower than those of agents as implicated by their LD50 (3.90+0.8 g/kg for Meisoindigo and 7.33+1.15 g/kg for NATURA in mice).

TABLE 1

Comparison of IC50 (μM) of Meisoindigo and NATURA with Chemotherapeutic Agents Against Breast Cancer Cell Lines by MTT

	CELL LINE	
Agent	MCF-7	SKBR-3
Meisoindigo	4.37 ± 0.31	2.17 ± 0.17
NATURA	2.91 ± 0.28	1.71 ± 0.14
Daunomycin	0.054 ± 0.011	0.061 ± 0.0051

. . .

DETD . . .

TABLE 2

Comparison of IC50 (μM) of NATURA with Chemotherapeutic Agents Against Colon Cancer Cells by MTT

Agent	CELL LINE LOVO	DLD-1
Meisoindigo	5.76 ± 0.72	2.15 ± 0.17
NATURA	4.31 ± 0.59	1.64 ± 0.181
Daunomycin	0.035 ± 0.004	0.094 ± 0.0130

. . .

DETD [0089]

TABLE 3

Comparison of IC50 (μM) between Meisoindigo, NATURA and Chemotherapeutic Agents against Prostate Cancer Cell Lines.

Agent	CELL LINE LNCaP	PC-3	DU145
Meisoindigo	2.34 ± 0.33	3.26 ± 0.51	8.31 ± 0.93
NATURA	1.72 ± 0.27	2.41 ± 0.39	6.92 ± 0.73
Daunomycin	N/A	0.24. . .	

DETD . . . cell basal medium) and RPMI 1640 containing 10% FBS, respectively. The cells grown exponentially were exposed to indicated concentrations of meisoindigo or NATURA for 24 hr. The cells were harvested, washed, and total proteins extracted as described previously [13]. One hundred. . .

DETD [0092] The inhibitory nature of NATURA and Meisoindigo on Ckd4/6 activity is shown in FIG. 7. Two different concentrations of 5.0 and 15.0 μm were used. The lower. . .

DETD . . . enter apoptosis. Our studies have demonstrated that approximately 48% of ML-1 cells became differentiated morphologically 5 days after exposure to Meisoindigo or NATURA. We also observed some L1210 leukemia cells became apoptotic by flow cytometry (FCM), suggesting that Meisoindigo and NATURA have a capacity to induce cell apoptosis. FIG. 8 confirms that Meisoindigo and NATURA cause apoptosis. The formation of DNA fragmentation (ladder) were measured, an indicator of cell apoptosis, in both LNCaP. . . neuroblastoma cells. To do this LNCaP and neuroblastoma N2A cells at exponential growth phase were exposed to indicated concentrations of Meisoindigo or NATURA or Taxol (20 nM, as a positive control) for 2 days. The cells were harvested, washed and DNA. . . Approximately 2 μg per lane of DNA were subjected to 2% agarose gel electrophoresis. As shown in FIG. 8, both Meisoindigo and NATURA induced a significant DNA fragmentation in LNCaP cells at concentration of 15 μM. This action was found more potent in N2 A neuroblastoma than in LNCaP cells where 5 μM of either Meisoindigo or NATURA was sufficient to significantly induce DNA ladders (panel B) which was consistent with MTT data, indicating that N2 A neuroblastoma cells are more sensitive to either Meisoindigo or NATURA.

DETD Anticancer Activity of Meisoindigo In Vivo

DETD [0094] As shown in Table 4, Meisoindigo showed significant anticancer activities for both Lewis Lung cancer and Walker 256 sarcoma and the activities were much stronger than that of its parental compound indirubin.

TABLE 4

Anti-cancer activities of Meisoindigo and NATURA in animals.

Tumor	Statistic Group	Dose (mg/kgxd)	No. of animals	Tumor Size X ± SD	Inhibition (%)	(ST.
	. . 10	3.5 ± 0.44	0			
Lung	Indirubin	100 + 9	10	2.58 ± 0.21	26.3 ± 2.8	
	P < 0.05					
Cancer	Meisoindigo	106 + 9	10	1.80 ± 0.15		
	48.6 ± 4.1 P < 0.01					
Walker	Control	--	10	9.7 ± 1.02	0	
256	Indirubin	100 + 9	10	3.94 ± 0.71	59.4 ± 2.9	
	P < 0.01					
	Meisoindigo	106 + 9	10	2.10 ± 0.17		
	71.6 ± 3.1 P < 0.01					

DETD [0095] Previous studies have shown that Meisoindigo induces ML-1 cell differentiation and maturation while suppresses the expression of oncogene c-myb, and arrests the cancer cells at G1. . . kinase activity have been indicated to play a role induction of cell differentiation. In this preliminary observation, we further confirmed Meisoindigo strongly suppresses D cyclins mediated cdk4/6 activity (FIG. 2). Over 56% of the enzyme activity was inhibited by 5.0 μM and complete inhibition was achieved when LNCaP prostate cancer cells were exposed to 15 μM of Meisoindigo for 24 h. Similar results were also obtained in human epithelial cell line HUVEC cells (data not shown), indicating that Meisoindigo may also have anti-angiogensis activity.

DETD [0096] These analyses indicate that Meisoindigo is an attractive therapeutic agent against various types of human cancers as they specifically target cyclin dependent kinases. Meisoindigo has already showed strong anticancer activities in animals. The stable and simple chemical structure of Meisoindigo makes it easy to synthesize and administer. Moreover, it possesses new chemical structure that exhibits anticancer activity, which can be. . .

DETD Chemical Synthesis of Meisoindigo. NATURA and its Derivatives:

DETD [0097] To synthesis Meisoindigo, typically, add equal molar amount of 2-hydroxyindole (see structure below) and N-methyl-indolinyl-diketone, glacial acetic acid (2.0 L of glacial acetic. . .

DETD Synergistic Combinations of Meisoindigo:

DETD [0104] Effects of Meisoindigo in combinations with Casodex or Proscar or Casodex plus Proscar on prostate cancer cell growth were evaluated by MTT in. . . at density of 5,000 cells per well. Twenty-four hours after the incubation, the cells were exposed to series dilution of Meisoindigo, or Casodex or Proscar alone. For combinations, the cells were exposed to Meisoindigo with either Casodex or Proscar, or with Casodex plus Proscar at ratio of 1:10, 1:4 or 1:10:4, respectively. The maximal concentrations were 5 μM for Meisoindigo, 50 μM for Casodex, and 20 μM for Proscar, respectively. Three days after the incubation, the cell growth was measured. . . combination. If CI>1, the combination is antagonistic, CI=1, additive, and CI<1, synergistic. As shown in Table 5-7, the combinations of Meisoindigo either with Casodex or Proscar or Casodex plus Proscar resulted in significant synergistic anti-proliferation effects as indicated by their combination index (CI).

TABLE 5

Combination index (CI) of Meisoindigo and Casodex in LNCaP cells

Meisoindigo (μM)	CASODEX (μM)	Percent of Inhibition	CI
0.0098	0.0980	0.9580	0.454
0.0195	0.1950	0.8585	0.213
0.0390	0.3900	0.8000	0.275

. . .

DETD [0105]

TABLE 6

Combination index (CI) of Meisoindigo and Proscar in LNCaP cells

Meisoindigo (μM)	Proscar (μM)	Percent of Inhibition	CI
0.0195	0.0780	0.919	4.555
0.0390	0.1560	0.900	5.243
0.0780	0.3120	0.814	1.908

. . .

DETD [0106]

TABLE 7

Combination index (CI) of Meisoindigo and Casodex plus Proscar in LNCaP cells

Meisoindigo (μM)	CASODEX (μM)	Proscar (μM)	Percent of Inhibition	CI
0.0098	0.0980	0.03904	0.8940	1.228
0.0195	0.1950	0.0780	0.8600	1.214
0.0390	0.3900	0.1560	0.7000. . .	

DETD Toxicological Study of Meisoindigo

DETD . . . with body weight between 18-22 g were randomly divided into 8 groups each with 10 animals. The animals were given Meisoindigo suspension orally at dosage of 0, 1.85, 2.60, 3.60, 5.10, 7.14, and 10.00 g/kg respectively. The animals were tested for. . . with the highest dose. The data were shown in Table 8.

TABLE 8

Summary of frequency of death after administration of Meisoindigo.

Dose (g/kg)	Log Dose	DFP*	[DF].sup.2P.sup.2	Unit of DF
10.00	1.00	1.00	1.00	7.326
7.14	0.85	0.80	0.64	5.842
5.10	0.70	0.70	0.49	5.524
3.60. . .				

DETD . . . rats with body weight between 60-70 g were randomly divided into 4 groups each with 10 animals, and orally given Meisoindigo daily at dosage of 0, 100, 200, and 400 mg/kg respectively for 30 days. Body weights of all tested animals. . . and kidney. A slight reduction of body weight increase was observed in the group of animals given 400 mg/kg of Meisoindigo. No differences between control and tested groups were observed in biochemical functions of blood, liver and kidney. Examination of histochemistry. . .

DETD [0116] Two dogs were initially tested for sub-acute toxicity of Meisoindigo. They were orally given 10 mg/kg daily for 3 months. Minor gastro intestinal irritations were observed occasionally. No

biochemical changes. . .

DETD . . . and vomiting as well as black-green stool. However, all of those symptoms disappeared after the termination of the treatment of Meisoindigo. Therefore, one dog was given an escalated dosage i.e., from 20 mg/kg to 40 mg/kg for additional 12 days after. . . Histochemical examinations were performed in the dogs administered the highest dose, and showed cellular edema, fatty degeneration, and scatter hyperplasia inflammation in liver tissues.

DETD [0119] On the basis of above initial tests, the sub-acute toxicities of Meisoindigo were further examined in dogs. Twelve dogs were randomly divided into 3 groups each having equal numbers of males and females, and orally given Meisoindigo at doses of 0, 5, and 10 mg/kg daily, respectively, for 6 months. No significant differences between control and tested. . .

DETD [0120] Twenty-four hours after the termination of Meisoindigo, half of the animal of each group were sacrificed, and dissected for pathological examination. No abnormalities were observed histochemically in. . .

DETD [0123] Meisoindigo at concentrations of 2, 20, 50, 100 and 200 μg/dish (10 cm), metabolically activated (+S9) and inactivated (-S9), were tested. . . 2,7-2AF, and 2-hydroxy-anthraquinone were used as positive controls. No induction of reverse mutations were observed at all tested groups of Meisoindigo, metabolically activated or non-activated, whereas all groups of positive controls showed significant increases in reverse-mutated colony formation.

DETD [0125] Ten KM white mice were divided into 5 groups, and given orally Meisoindigo at dosage of 0, 0.4, 0.8 and 2.0 g/kg (equal to 1/10, 1/5, and 1/10 of LD50, respectively) daily for. . . polychromatic erythrocytes from bone marrow were stained with Giemsa to count micronuclei. No differences were obtained between negative control and Meisoindigo-tested groups (1.86, 1.33, and 2.66 per thousand for the tested groups compared with 1.33 per thousand of control group), whereas,. . . positive control (41.16 per thousand against negative control 1.33 per thousand). These data demonstrated a negative induction of micronuclei of Meisoindigo.

DETD [0127] Human blood withdrawn from healthy males was cultured in the presence of metabolically activated, or non-activated different concentrations of Meisoindigo (0, 5, 10, and 25 μM) for 72 hrs, or aflatoxin B1 (AFB1) and mitomycin C (MMC) as positive controls. The aberration of chromosomes was then examined under microscope. No differences were found between negative controls and all Meisoindigo-tested groups, metabolically activated or non-activated, ($P>0.05$), whereas, the differences between positive and negative controls were significant ($P<0.01$).

DETD [0128] Previous studies have shown that Meisoindigo induces ML-1 cell differentiation and maturation while suppresses the expression of oncogene c-myb, and arrests the cancer cells at G1. . .

DETD [0134] Our previous studies have showed that Meisoindigo induce ML-1 cell differentiation and maturation while suppressing the expression of oncogene c-myb, and arresting the cancer cells at G1. . . its kinase activity have been shown to play a role in the induction of cell differentiation [25-27]. We further confirmed Meisoindigo strongly suppress D cyclins mediated cdk4/6 activity. Similar to Meisoindigo, after 24 hours incubation with LNCaP prostate cancer cells, NATURA at 5.0 μM and 15 μM inhibited cdk2 enzyme activity. . . 4/6) from separated experiments was between 1.5 to 6.0 [M in LNCAP cells. No remarkable differences in the inhibitions of Meisoindigo and NATURA on those cdks were observed.

DETD [0135] Similar results were also obtained in human epithelial cell line HUVEC cells (data not shown), indicating the Meisoindigo and NATURA may also have anti-angiogenesis activity.

DETD [0136] The specificity of Meisoindigo and NATURA on cdk activities were further established by the examining the effects of those compounds on the activities of. . .

DETD [0139] Meisoindigo and NATURA also significant inhibit expression of cyclin D1 in HUVEC cells. Exponentially growing HUVEC cells were exposed to 5.0 and 15 μM of Meisoindigo and NATURA, 24 hrs after the exposures, the cells were harvested, washed, and total proteins extracted for Western blot analysis [13] using a monoclonal antibody specific against cyclin D1 (Dako). As shown in FIG. 12, both Meisoindigo and NATURA strongly inhibit expression of cyclin D1 in this cell lines. The cyclin D1 protein almost completely lost when the cells were exposed to 15 μM of either Meisoindigo and NATURA. As a result, phosphorylation of a tumor suppressor protein Rb, a native substrate of cyclin D1 mediated cdks,. . .

DETD . . . apoptosis. Our previous studies have demonstrated that approximately 48% of ML-1 cells became differentiated morphologically 5 days after exposure to Meisoindigo. We also observed some L1210 leukemia cells became apoptotic by flow cytometry (FCM), suggesting Meisoindigo also have a capacity to induce cell apoptosis. To confirm our hypothesis and earlier observations, we measured poly(ADP-ribose) polymerase (PARP). . . prostate and N2A neuroblastoma cells. LNCaP and neuroblastoma N2A cells at exponential growth phase were exposed to indicated concentrations of Meisoindigo or NATURA or Taxol (20 nM, as a positive control). for 2 days. The cells were harvested, washed and DNA. . . Approximately 2 μg per lane of DNA were subjected to 2% agarose gel electrophoresis. As shown in FIG. 8, both Meisoindigo and NATURA induced a significant DNA fragmentation in LNCaP cells at concentration of 15 μM. This action was found more potent in N2 A neuroblastoma cells where 5 μM of either Meisoindigo or NATURA was sufficient to significantly induce DNA ladders (panel B) which was consistent with MTT data, indicating that N2 A neuroblastoma cells are more sensitive to either Meisoindigo and NATURA.

DETD . . . the DNA ladder formation, a strong induction of PARP protein degradation was observed when N2A cells were exposed to either Meisoindigo or NATURA (FIG. 13). Our data thus, demonstrate that both Meisoindigo and NATURA significantly induce human cancer cell apoptosis.

DETD [0147] FIG. 12. shows the effect of Meisoindigo and NATURA on the protein level of cyclin D1. HUVEC cells grown exponentially were treated for 24 hrs with 5 and 15 mM of Meisoindigo and NATURA. The cells were harvested, washed, and total proteins extracted for Western blot analysis as previously described [1] using. . .

DETD . . . shows the degradation of poly(ADP-ribose) polymerase in neuroplastoma N2A cells. N2A cells grown exponentially were treated with different concentrations of Meisoindigo or NATURA for 24 hours. The cells were harvested, washed, and total proteins extracted for determination of PARP degradation by. . .

DETD [0158] 10. Ji, X. J., et al., Pharmacological studies of meisoindigo: absorption and mechanism of action. Biomed Environ Sci, 1991. 4(3): p. 332-7.

DETD . . . of differentiation and down-regulation of c-myb gene expression in ML-1 human myeloblastic leukemia cells by the clinically effective anti-leukemia agent meisoindigo. Biochem Pharmacol, 1996. 51(11): p. 1545-51.

CLM What is claimed is:
9. A method of synthesizing a meisoindigo compound comprising: adding about equal molar amounts of 2-hydroxyindole and N-methyl-indolinyl-diketone to produce a reaction substance; mixing the reaction substance. . . about 70 to 80° C. for 1 to 3 hours to form a precipitate; and recovering the precipitate as the meisoindigo compound.

IT 97207-47-1, Meisoindigo
(isoindigo, indigo, and indirubin derivs. for treatment of cancer, and use with other agents)

L5 ANSWER 4 OF 8 NAPRALERT COPYRIGHT (C) 2006 BD. TRUSTEES, U. IL. on STN
ACCESSION NUMBER: 92:41131 NAPRALERT
DOCUMENT NUMBER: M08940
TITLE: STUDIES ON ANTINEOPLASTIC ACTION OF N-METHYLISOINDIGOTIN
AUTHOR: JI X J; ZHANG F R; LIU Y; GU Q M
CORPORATE SOURCE: INSTITUTE OF MATERIA MEDICA, CHINESE ACADEMY OF MEDICAL SCI, BEIJING CHINA
SOURCE: YAO HSUEH HSUEH PAO (1985) 20 (4) p. 247-251.
DOCUMENT TYPE: (Research paper)
LANGUAGE: CHINESE
CHARACTER COUNT: 3104
ORGN . . .
ACTIVE
Comment(s): RESULTS SIGNIFICANT AT P < 0.05 LEVEL..
COMPOUND. Chemical name (CN): INDIGOTIN,ISO: N-METHYL
CAS Registry Number (RN): 97207-47-1
Class identifier (CI): INDOLE ALKALOID
TYPE OF STUDY (STY): IN VIVO Classification (CC): DNA SYNTHESIS INHIBITION
Dosage Information: IP; RAT;. . . P < 0.01 LEVEL..
ANIMALS WERE DOSED TWICE.
COMPOUND. Chemical name (CN): INDIGOTIN,ISO: N-METHYL
CAS Registry Number (RN): 97207-47-1
Class identifier (CI): INDOLE ALKALOID
TYPE OF STUDY (STY): IN VIVO Classification (CC): DNA SYNTHESIS INHIBITION
Dosage Information: GASTRIC INTUBATION;. . . P < 0.01 LEVEL..
ANIMALS WERE DOSED TWICE.
COMPOUND. Chemical name (CN): INDIGOTIN,ISO: N-METHYL
CAS Registry Number (RN): 97207-47-1
Class identifier (CI): INDOLE ALKALOID
TYPE OF STUDY (STY): IN VIVO Classification (CC): ANTITUMOR ACTIVITY
Dosage Information: GASTRIC INTUBATION; MOUSE;. . .
Qualitative results: INACTIVE
ILS
Comment(s): DOSING ON DAYS 1-8.
COMPOUND. Chemical name (CN): INDIGOTIN,ISO: N-METHYL
CAS Registry Number (RN): 97207-47-1
Class identifier (CI): INDOLE ALKALOID
TYPE OF STUDY (STY): IN VIVO Classification (CC): ANTITUMOR ACTIVITY
Dosage Information: GASTRIC INTUBATION; MOUSE;. . . AT P < 0.01 LEVEL.. DOSING ON DAYS 1-9..
COMPOUND. Chemical name (CN): INDIGOTIN,ISO: N-METHYL
CAS Registry Number (RN): 97207-47-1
Class identifier (CI): INDOLE ALKALOID
TYPE OF STUDY (STY): IN VIVO Classification (CC): ANTITUMOR ACTIVITY
Dosage Information: GASTRIC INTUBATION; MOUSE;. . . AT P < 0.01

LEVEL.. DOSING ON DAYS 1-9..
COMPOUND. Chemical name (CN): INDIGOTIN,ISO: N-METHYL
CAS Registry Number (RN): 97207-47-1
Class identifier (CI): INDOLE ALKALOID
TYPE OF STUDY (STY): IN VIVO Classification (CC): HEPATOTOXIC ACTIVITY
Dosage Information: GASTRIC INTUBATION; DOG;. . . 12 DAYS OF DOSING AT 40 MG/KG. HISTOPATHOLOGICAL EXAMINATION OF THE LIVER REVEALEDCELL SWELLING, PARTIAL FATTY DEGENERATION, AND FOCAL PROLIFERATIVE INFLAMMATION.
COMPOUND. Chemical name (CN): INDIGOTIN,ISO: N-METHYL
CAS Registry Number (RN): 97207-47-1
Class identifier (CI): INDOLE ALKALOID
TYPE OF STUDY (STY): IN VIVO Classification (CC): TOXIC EFFECT(GENERAL)
Dosage Information: GASTRIC INTUBATION; DOG;. . . OF THE LIVER AFTER DOSING WITH 20 MG/KG FOR 73 DAYS REVEALED CELL SWELLING, PARTIAL FATTY DEGENERATION, AND FOCAL PROLIFERATIVE INFLAMMATION.
COMPOUND. Chemical name (CN): INDIGOTIN,ISO: N-METHYL
CAS Registry Number (RN): 97207-47-1
Class identifier (CI): INDOLE ALKALOID
TYPE OF STUDY (STY): IN VIVO Classification (CC): TOXICITY ASSESSMENT(QUANTITATIVE)
Dosage Information: GASTRIC INTUBATION; MOUSE; LD50: 3.9 GM per KG
Qualitative results: .
COMPOUND. Chemical name (CN): INDIGOTIN,ISO: N-METHYL
CAS Registry Number (RN): 97207-47-1
Class identifier (CI): INDOLE ALKALOID

L5 ANSWER 5 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN
ACCESSION NUMBER: AEB26712 DNA DGENE
TITLE: Composition useful in the treatment of an inflammatory-related disease such as arthritis comprises a compound selected from isoindigo, indigo, indirubin or their derivatives; anti-inflammatory agent and carrier.
INVENTOR: Wang L; Liu X M; Mo L; Mencher S K; Mccarron J P
PATENT ASSIGNEE: (WANG-I)WANG L.
(LIUX-I) LIU X M.
(MOLL-I) MO L.
(MENC-I) MENCHER S K.
(MCCA-I) MCCARRON J P.
PATENT INFO: US 2005154046 A1 20050714 37
APPLICATION INFO: US 2004-754547 20040112
PRIORITY INFO: US 2004-754547 20040112
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2005-505477 [51]
DESCRIPTION: Human TNF-alpha gene amplifying RT-PCR primer, SEQ ID NO: 3.
TI. . . the treatment of an inflammatory-related disease such as arthritis comprises a compound selected from isoindigo, indigo, indirubin or their derivatives; anti-inflammatory agent and carrier.
KW Therapeutic; inflammation; antiinflammatory; immune disorder; immunomodulator; autoimmune disease; immunosuppressive; metabolic disorder; metabolic; bone disease; osteopathic; musculoskeletal disease; cardiovascular disease; cardiovascular-gen.; liver disease;. . .
AB. . . invention relates to pharmaceutical compositions and methods for treating inflammatory-related diseases associated with pro-inflammatory cytokine expression and/or reduced expression of anti-inflammatory cytokines. The composition comprises of a compound

selected from isoindigo, indigo, indirubin or their derivatives; an anti-inflammatory agent and a carrier. The invention is useful in the treatment of an inflammatory-related disease associated with cytokine expression levels. . . conjunctivitis; diabetic retinopathy; Sjogren's syndrome; uveitis; a pulmonary disorder such as allergic rihinitis, asthma, chronic obstructive pulmonary disease, chronic granulomatous inflammation, cystic fibrosis and sarcoidosis; a renal disease; dermatitis; HIV-related cachexia; cerebral malaria; ankylosing spondolytis; leprosy; anemia and fibromyalgia. The present. . . a real-time (RT)-PCR primer used for amplifying human tumor necrosis factor (TNF)-alpha gene. This sequence is used to illustrate that meisoindigo suppresses the secretion and expression of TNF-alpha in human monocytic cell line THP-1 cells.

L5 ANSWER 6 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN
ACCESSION NUMBER: AEB26710 DNA DGENE
TITLE: Composition useful in the treatment of an inflammatory-related disease such as arthritis comprises a compound selected from isoindigo, indigo, indirubin or their derivatives; anti-inflammatory agent and carrier.
INVENTOR: Wang L; Liu X M; Mo L; Mencher S K; Mccarron J P
PATENT ASSIGNEE: (WANG-I)WANG L.
(LIUX-I) LIU X M.
(MOLL-I) MO L.
(MENC-I) MENCHER S K.
(MCCA-I) MCCARRON J P.
PATENT INFO: US 2005154046 A1 20050714 37
APPLICATION INFO: US 2004-754547 20040112
PRIORITY INFO: US 2004-754547 20040112
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2005-505477 [51]
DESCRIPTION: Human IL-6 gene amplifying PCR primer, SEQ ID NO: 1.
TI. . . the treatment of an inflammatory-related disease such as arthritis comprises a compound selected from isoindigo, indigo, indirubin or their derivatives; anti-inflammatory agent and carrier.
KW Therapeutic; inflammation; antiinflammatory; immune disorder; immunomodulator; autoimmune disease; immunosuppressive; metabolic disorder; metabolic; bone disease; osteopathic; musculoskeletal disease; cardiovascular disease; cardiovascular-gen.; liver disease;. . .
AB. . . invention relates to pharmaceutical compositions and methods for treating inflammatory-related diseases associated with pro-inflammatory cytokine expression and/or reduced expression of anti-inflammatory cytokines. The composition comprises of a compound selected from isoindigo, indigo, indirubin or their derivatives; an anti-inflammatory agent and a carrier. The invention is useful in the treatment of an inflammatory-related disease associated with cytokine expression levels. . . conjunctivitis; diabetic retinopathy; Sjogren's syndrome; uveitis; a pulmonary disorder such as allergic rihinitis, asthma, chronic obstructive pulmonary disease, chronic granulomatous inflammation, cystic fibrosis and sarcoidosis; a renal disease; dermatitis; HIV-related cachexia; cerebral malaria; ankylosing spondolytis; leprosy; anemia and fibromyalgia. The present sequence is a gene-specific PCR primer used for amplifying human IL-6 gene. This sequence is used to illustrate that meisoindigo inhibits the secretion and expression of IL-6 in human monocytic cell line THP-1 cells.

L5 ANSWER 7 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN
ACCESSION NUMBER: AEB26711 DNA DGENE
TITLE: Composition useful in the treatment of an inflammatory-related disease such as arthritis comprises a compound selected from isoindigo, indigo, indirubin or their derivatives; anti-inflammatory agent and carrier.
INVENTOR: Wang L; Liu X M; Mo L; Mencher S K; Mccarron J P
PATENT ASSIGNEE: (WANG-I) WANG L.
(LIUX-I) LIU X M.
(MOLL-I) MO L.
(MENC-I) MENCHER S K.
(MCCA-I) MCCARRON J P.
PATENT INFO: US 2005154046 A1 20050714 37
APPLICATION INFO: US 2004-754547 20040112
PRIORITY INFO: US 2004-754547 20040112
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2005-505477 [51]
DESCRIPTION: Human IL-6 gene amplifying PCR primer, SEQ ID NO: 2.
TI . . . the treatment of an inflammatory-related disease such as arthritis comprises a compound selected from isoindigo, indigo, indirubin or their derivatives; anti-inflammatory agent and carrier.
KW Therapeutic; inflammation; antiinflammatory; immune disorder; immunomodulator; autoimmune disease; immunosuppressive; metabolic disorder; metabolic; bone disease; osteopathic; musculoskeletal disease; cardiovascular disease; cardiovascular-gen.; liver disease;. . .
AB . . . invention relates to pharmaceutical compositions and methods for treating inflammatory-related diseases associated with pro-inflammatory cytokine expression and/or reduced expression of anti-inflammatory cytokines. The composition comprises of a compound selected from isoindigo, indigo, indirubin or their derivatives; an anti-inflammatory agent and a carrier. The invention is useful in the treatment of an inflammatory-related disease associated with cytokine expression levels. . . conjunctivitis; diabetic retinopathy; Sjogren's syndrome; uveitis; a pulmonary disorder such as allergic rihinitis, asthma, chronic obstructive pulmonary disease, chronic granulomatous inflammation, cystic fibrosis and sarcoidosis; a renal disease; dermatitis; HIV-related cachexia; cerebral malaria; ankylosing spondolytis; leprosy; anemia and fibromyalgia. The present sequence is a gene-specific PCR primer used for amplifying human IL-6 gene. This sequence is used to illustrate that meisoindigo inhibits the secretion and expression of IL-6 in human monocytic cell line THP-1 cells.

L5 ANSWER 8 OF 8 DGENE COPYRIGHT 2006 The Thomson Corp on STN
ACCESSION NUMBER: AEB26713 DNA DGENE
TITLE: Composition useful in the treatment of an inflammatory-related disease such as arthritis comprises a compound selected from isoindigo, indigo, indirubin or their derivatives; anti-inflammatory agent and carrier.
INVENTOR: Wang L; Liu X M; Mo L; Mencher S K; Mccarron J P
PATENT ASSIGNEE: (WANG-I) WANG L.
(LIUX-I) LIU X M.
(MOLL-I) MO L.
(MENC-I) MENCHER S K.
(MCCA-I) MCCARRON J P.
PATENT INFO: US 2005154046 A1 20050714 37

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APPLICATION INFO: US 2004-754547 20040112
PRIORITY INFO: US 2004-754547 20040112
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2005-505477 [51]
DESCRIPTION: Human TNF-alpha gene amplifying PCR primer, SEQ ID NO: 4.
TI . . . the treatment of an inflammatory-related disease such as arthritis comprises a compound selected from isoindigo, indigo, indirubin or their derivatives; anti-inflammatory agent and carrier.
KW Therapeutic; inflammation; antiinflammatory; immune disorder; immunomodulator; autoimmune disease; immunosuppressive; metabolic disorder; metabolic; bone disease; osteopathic; musculoskeletal disease; cardiovascular disease; cardiovascular-gen.; liver disease;. . .
AB . . . invention relates to pharmaceutical compositions and methods for treating inflammatory-related diseases associated with pro-inflammatory cytokine expression and/or reduced expression of anti-inflammatory cytokines. The composition comprises of a compound selected from isoindigo, indigo, indirubin or their derivatives; an anti-inflammatory agent and a carrier. The invention is useful in the treatment of an inflammatory-related disease associated with cytokine expression levels. . . . conjunctivitis; diabetic retinopathy; Sjogren's syndrome; uveitis; a pulmonary disorder such as allergic rihinitis, asthma, chronic obstructive pulmonary disease, chronic granulomatous inflammation, cystic fibrosis and sarcoidosis; a renal disease; dermatitis; HIV-related cachexia; cerebral malaria; ankylosing spondolytis; leprosy; anemia and fibromyalgia. The present. . . is a RT-PCR primer used for amplifying human tumor necrosis factor (TNF)-alpha gene. This sequence is used to illustrate the meisoindigo suppresses the secretion and expression of TNF -alpha in human monocytic cell line THP-1 cells.